

**Norman Goldstein MD**

**Vog in Hawaii**

This issue of the *Journal* focuses on a major problem on the Big Island of Hawaii—on all our islands and for our neighbors in the Pacific.

The earliest reference to vog appeared in a newspaper article in 1950 (*Honolulu Star Bulletin*. January 19, 1950:1). Capt Charles K. Stidd, commanding officer of the Hawaii Air National Guard weather station described his vog observations (*Honolulu Star Bulletin*. June 16, 1959:1).

And Dr Nathan Burbane, professor of environmental health at the UH School of Public Health noted in 1969 the concentration of vog (volcano-induced fog) is not enough at the moment to even cause minor irritation. "It may be that two or three very young children with other allergies may have some respiratory discomfort, but the chance of that happening with the present concentration would be very rare, I would say. Meanwhile, it sure is depressing isn't it?"

It is more than depressing! It is dangerous! Hawaii has the highest asthma death rate in the United States (*J Allergy Clin Immunol*. 84:421-34). The problem of chronic obstructive pulmonary disease (COPD) and asthma has been exhaustively studied by Mannino, Ruben, the Holschuhs, and Wilson and is reported in this issue of the *Journal*.

This study represents a record for our *Journal*. It took three years of reviews, revisions and especially perseverance by David Mannino MD and his co-workers to obtain acceptance to publish this excellent report.

We also present some abstracts of a vog symposium on September 12, 1995 sponsored by the Department of Health.

Dr Bruce Anderson, Deputy Director for Environmental Health, Department of Health, and Dr Kenneth Olden, Director of the National Institute for Environmental Health Science and National Toxicology Program, will continue the studies of the health effects of vog.



**Frederick C. Holschuh MD**

In the latter part of the 1980s, when the eruption of Kilauea Volcano had been continuous for more than five years, Hawaii County Council Chair Russell Kokubun and Civil Defense Chief Harry Kim called together a task force on the eruption's effects on the people of our island. I was privileged to be asked to serve on this committee which became known as the Hawaii County Vog Authority. During the years that the Vog group met to discuss and study the effects of vog, we received reports on types of volcanoes, geophysics, air quality, weather patterns, acid rain, agriculture, and human health. Many national and international experts on volcanoes, and local authorities on pulmonary disease assisted the group. I began to report patient encounters in the Hilo Medical Center Emergency Department where I had noticed increased respiratory tract problems and upper respiratory complaints during "bad vog days." I often heard people with asthma and COPD tell me they would sometimes sit in air conditioned shopping malls for relief.

Dr Sam Ruben, then Hawaii County district health officer, and I planned a study of ER visits around the island to include two years prior to the eruption and then annually until the study ended. ER visits at the five community hospitals are logged manually in log books. More than 200,000 patient encounters were received by the student investigators who were supported by grants and assisted by the Lung Association's Big Island office. The culmination of this investigation is summarized in our article in this issue of the *Journal*.

I still practice in the Hilo Medical Center Emergency Department and continue to see the effects of vog on human health. Some years ago, Dr Bob Arnott of the "CBS Morning News" came to Hilo to interview me about vog. A nationally aired segment mentioned vog effects although my comments were not as sensational as he would have liked. What I told him, and continue to tell anyone who will listen, including all asthma and COPD patients I see is, "We can do little about vog, but we can do everything about smoking cessation."

Two interesting bits of information from the meetings of the Vog Authority. An expert on volcanic eruptions, when asked how long we could expect this eruption to continue, said, "In my estimation, it could be three days to 300 years." Another person when asked what the ancient Hawaiians did during prolonged eruptions answered, "They moved."

With some exceptions, we generally can't expect people to move, but we can do things to help. We can assist with a "vog index" type daily air quality report (the Department of Health is working on this). We can determine if schools in heavy vog areas should be air conditioned, and do everything we can to control tobacco use.